AGRICULTURAL DEPARTMENT.

J. P. STELLE, EDITOR.

PUBLISHER'S NOTICE—All communications intended for this department should be addressed to Prof. J. P. Stelle, Fort Worth, Tex.

ON BANKING SWEET POTATOES.

Last week a correspondent asked for an article setting forth how they "bank" and keep their sweet potatoes in the gulf coast country east of the Mississippi river. Replying, we promised this article, and gave it as our opinion that sweet potatoes might be kept through winter by the banking method as well in Texas as in the region named, particularly on our sandy lands.

In those pine regions of Mississippi, Alabama, Georgia and Florida the sweet potato raiser allows his crop to remain in the ground to as late a date as he can safely risk it against having them frozen by a blizzard. He cares nothing for a light frost, indeed not a few prefer having the vines blackened by a frost previous to digging the crop. The notion is that a frost on the vines checks all growth and tends to a rapid maturity of the tubers, this rendering them less sappy and better qualified to keep than they would be if taken up while the vines were still in active growth.

We have heard it argued that in case of frost-bidden vines the effects of the frost would descend to the tubers and impair their quality more or less, but this is a mistake. Sap never runs downward in a plant. We have always been a very successful sweet potato raiser, and while operating on the gulf coast we invariably made it our rule to leave the tubers in the ground about one week after the vines had been killed by frost, provided, of course, that there was no apparent prospect of coming severe weather before the end of that time. And now for directions should you desire to harvest and bank your potatoes after the plan pursued by the successful sweet potato raiser in the sea coast country east of the Mississippi river:

Begin by "dragging off the vines." This work is usually accomplished by running a light plow between the rows—some use a turn plow, others a shovel plow or scooter. The vines gather around the plow and soon convert it into a mere drag, pulling the vines from the rows as it passes along.

Having the vines removed, run a turn plow well down in the middle between the rows. Many fair-sized potatoes are often found in the middles, so have your pickers follow the plow, taking up the potatoes and depositing them along in heaps where they will be out of the way of subsequent operations. Run your plow on each side of this furrow, throwing the dirt into it the same as if ridging up for a new crop, the pickers still following along the furrows. When the row proper is reached, bar it off along the side, then change to the next middle. Proceed as in the first instance, and when the row is reached on the other side and barred off, split it out with two or three furrows (or as many as needed to bring up all the potatoes), and so keep on until the patch is gone over, and the potatoes are lying in heaps on the plowed ground.

Great care should be exercised in handling the potatoes not to bruise them. They should not be pitched far to the heaps, striking upon the potatoes already there, for this would be sure to bruise them slightly, at least. The heaps should be near each other, and the potatoes simply dropped upon the pile or around it. One of the greatest troubles in keeping sweet potatoes is found in what is called "dry rot." This dry rot is invariably the result of a bruise in handling. If the potatoes are handled without any bruise whatever there will be no dry rot.

If the potatoes can be left in the heap a few hours to dry out before collecting them for the banks it will be all the better for them.

Select a dry and well-drained situation for your banks. Scrape off the surface soil where your bank is to be made, down to the depth of three or four inches, raking it into a ridge around like you were forming a miniature circus ring. This bed for the bank should be about eight feet in diameter, and when completed will be cupping to the middle somewhat like a saucer. Bring good dry straw, or grass of some kind, and fill the depression level full to the out-edge of the ring, piling straw enough upon the ring to have the straw-deposit still maintaining the saucer shape. In the middle of the bed drive a small stake down into the soil sufficient to stand firmly and long enough to have its top about four feet above the straw.

Now begin to pile your potatoes around this stake, carefully, so as not to bruise them. Run the pile up in as sharp a cone as you can make them maintain. Keep adding round and round until they have reached to the outer edges of the circular bed and are up to the top of the stake. You can put about twenty bushels in such a pile, which is enough for one bank. Next put about two inches of straw over the pile and follow with a dozen or so of narrow strips of board or other suitable sticks, letting one end rest against the surrounding ring of earth and straw and the other end on the top of the stake coming up from the center, or upon the strips or sticks first laid down, above the top end of the stake. Place over these strips six inches depth of straw, covering the entire heap from bottom to top.

Let the pile so stand about twenty-four hours, if there is no danger of freeze, then begin around the base of the heap and place on dirt, going round and round with a spade, until the heap is covered deep enough to protect the potatoes from any freeze that might happen to come. Leave a space of five or six inches at the immediate top of the cone without dirt covering, stuffing it full of straw as the dirt rises above it. Pat the dirt firmly on all sides of the cone with the back of your spade, and your potato bank is finished.

In digging up the dirt around your potato pile you made a depression deeper than a level with the bottom of the bed. Cut a ditch out from this so that no water can stand there when it rains. Construct some kind of cheap shed over the bank to break off dashing rains and your work is done. In the coast country where old dead pine trees are abundant it is common to collect the dead pine bark, which peels off easily, and place it around the pile, concave next the dirt to serve as a shelter. A bit of bark is laid over the top of the hill to prevent water from running in through the straw-filled opening already mentioned. The opening is left to fill the office of ventilator for the potatoes in the bank.

Should you desire to keep the potatoes longer than the opening up of warm weather next spring, you add more dirt to the heap as the warm weather comes on to hold the potatoes cool and prevent sprouting. We have kept sweet potatoes entirely sound and good for ten months on this plan.

In the coast country under consideration they use dry pine straw (pine needles), in making their banks, but any kind of good dry straw or grass would answer the purpose equally as well as pine straw. The strips of board laid on are to prevent the covering from pressing heavily upon the potatoes, a thing that might bruise many of them.

ENEMIES OF THE PECAN TREE.

But three insect enemies to the pecan tree are reported by entomologists as yet, and after a careful search for them, begun in 1880, we have been able to find but one of the three in Texas. The others may be here, but if so they have escaped our attention.

The insect injurious to the pecan tree, that we have seen in Texas, is commonly known as the fall web-worm—scientific name Hyphantria cunea. It is a small caterpillar, that spins an unsightly web in the foliage of the tree, which, if undisturbed, increases in size throughout the season, looking ugly and damaging the tree to some extent by destroying many of its leaves. Fortunately it is not at all hard to manage. The arsenite insecticides, such as Paris green, London purple, or a diluted solution of arsenic, as recommended by us in former articles for the cotton worm, will promptly put an end to its operations, and do no harm to the tree. Another simple and sure remedy is to burn the webs so soon as they appear, with a ball of cotton or rags tied to the end of a pole and saturated with kerosene. Hold the flaming ball under the web just a moment—a single flash is sufficient. This will destroy the worms and not hurt the young twigs of the tree. A web simply twisted out with a pole may be rebuilt, but no effort is ever made to rebuild a burned-out web.

This caterpillar is the larva of a small moth or miller, of a whitish color, spotted more or less with black or brown. The eggs of the moth are laid on the leaves early in spring, and a week or so later the worms are hatched to work well through the season, unless destroyed as suggested. The harm effected is by no means serious, as the twigs of the tree upon which the webs hang seldom die, but put out again all right in the next spring. Of course it is something against the tree to have its leaves destroyed, therefore the webs and worms should be promptly deseroyed.

Another insect occasionally found by us working upon both the pecan and the hickory, east of the Mississippi river, is a small borer that cuts through the bark of the main trunk and digs a tunnel direct into the wood, ranging upward. It is about one-half of an inch in length, and looks a little like the borer found in peach trees, though its head is not quite so broad and flat. Of course it is a larva—its parent is a black beetle, spotted and marked more or less with bright yellow. Length, about three-fourths of an inch; long "feelers" come out from either side of the head, turning back more or less. Scientific name, Cyllene picta.

This beetle deposits eggs upon the outer-bark of the tree early in spring, and a week or so thereafter finds the young borers hatched and cutting inward, as already mentioned. By fall all transformations of the insect have been passed, leaving the perfect beetles to hibernate through the winter and be ready for starting a new brood on the opening of the next spring.

The remedy for this pest would be to give the trunks of the trees a good spraying with our diluted solution of arsenic early in spring. This would effectually destroy the young borers ere they had more than started into the bark, for they eat their way in and hence could not avoid getting a dose of the poison.

As already stated, this borer has never yet been found by us in Texas, and the almost invariable healthy and luxuriant appearance of our wild pecan trees leads us to think it is not here. A hickory or pecan tree infested by this borer to any great extent always looks sickly. But should it be here, or should it make its appearance later, the means of cutting it short are, as you see, both simple and inexpensive. One thousand large pecan trees could be protected against it at less than 50 cents annually for the poison.

The third insect to which our attention has been called as working upon the pecan tree in other states, but which we have never yet seen in Texas, is a twig girdler known to entomologists as Oncideres cingulatus. It is a grayish brown beetle about three-fourths of an inch in length, armed with long "feelers" somewhat like those of the beetles that make most of the tree borers, though the "feelers" extend more to front than do the "feelers" (antennæ) of the borer beetles. It has a snout or bill which turns squarely downward at right angles with its body, and now for what it does:

This mischievous little beetle flies up into the pecan, the hickory or the persimmon trees (and possibly into trees of other families), and selecting a twig proceeds to pierce it and deposit eggs therein. Those eggs hatch little grubs which work along the pith of the twigs, but it is necessary for them to come out and go into the ground before they can pass through their transformations and become perfect beetles like the parent. But the parent has made provisions to favor all this. After depositing her eggs in the twig she descends a few inches, and with her bill already mentioned begins girdling it round and round. She works only at night, and it takes several nights for her to complete the job in hands. When completed the twig is girdled round until almost cut off, just wood enough being left to enable it to hang on till towards fall. By fall the grubs are ready to go into the ground, and then the fall winds come and break off the twig at the girdle. It drops to the earth and the grubs come out, dig into the soil and undergo their transformations.

The only damage this insect does to the tree is to prune it, and sometimes it prunes where we would rather that no pruning had been done. Fortunately it never appears in very large representation; if it did we would have to grin and bear it, for as yet science has settled upon no remedy for the pest. We have always found it worse on the common persimmon (Diospyros virginiana), than on either the hickory or the pecan. The probability is that it will never trouble the pecan grower to any extent worthy of serious consideration.

The pecan has no diseases that we know of. On several occasions we have heard of "twig blight" on the pecan, and more than once we have traveled a considerable distance to investigate it. Invariably we have found it springing from the same cause: Swampy or soggy land. While occasional overflows of streams do not at all injure the pecan, but rather help it, lands permanently swampy or soggy are against it. The trouble shows first on the slender twigs, and then we hear of pecan blight. It is scarcely necessary for us to suggest that immediate and thorough drainage would be the remedy in all such cases. Cut deep ditches to the grove leading off the water standing in the soil and subsoil and the trees will promptly recover.

We will state in conclusion that of all the American trees known to us none approach so near entire exemption from disease and from serious insect ravages as does the pecan.

OUR CORRESPONDENTS.

This department is devoted to answering such questions as may be asked by our subscribers, which may be of general information. Inquiries of personal character that require answer by mail should always have stamp inclosed. Please give full name and postoffice address in addition to any such signature as "Subscriber," or "A. G. D." not for publication, if against the will of the writer, but to admit of direct communication should such a thing be deemed necessary. Address as directed at head of this page.

THE GAZETTE AND THE PECAN.

Your articles on pecan culture for Texas have brought about a new awakening, and have started everybody here to talking about the pecan. All the talk is in one direction, to-wit: The pecan is among the greatest of the many great things that nature has given us. No other state could compete with Texas in pecan culture, for Texas, as you have often stated, is undoubtedly the natural home of the pecan. I am entirely with you in your suggestion that the first pecan tree grew in Texas. It has, by battling against less favorable conditions, finally spread itself to a few other regions, but the further it gets away from Texas the lower becomes its grade in point of perfection. The most perfect pecans of the world, in a natural state, are found in Texas.

The interest that you have aroused in the pecan emboldens me to say that the Fort Worth GAZETTE will, during this coming winter, have founded to itself thousands upon thousands of living monuments to stand and represent the publication long after all the people now living shall have been gathered to their fathers. Those monuments may bear no inscription telling to whom they have been erected, but the facts in the case will remain all the same, even though unproclaimed.

Naturally, Texas is the great pecan state—artificially she is to remain the great pecan state. In my honest opinion there can be no doubt about that.

Since you began working up the pecan through the Fort Worth GAZETTE I find great changes in pecan literature, as compared to that formerly spread before the people. Lots of ideas evidently original with THE GAZETTE are creeping into all the pecan literature now getting into print. One of these, of especial importance, was that the pecan could be planted along our streams where the land was exposed to occasional overflow, and hence was unsafe for any other crop. All these lands, as you state, can be put into pecan groves, and thus rendered more valuable than any other lands we have, the occasional overflow being more of advantage to the trees than otherwise.

Another important idea was that it was not necessary to clear up those bottoms before starting the grove. All needed was to measure off the rows, dig out the hills, cut away overhanging growths and plant the nuts. This idea will probably lead to the planting of thousands of acres to pecans the coming winter that would not have been planted but for the Fort Worth GAZETTE.

Both of these important ideas now appear in all our recent pecan literature, but the first I ever saw of them appeared in the Fort Worth GAZETTE about one year ago.

We are beginning to look upon the Fort Worth GAZETTE as our boss pecan authority, and on that account I write you this letter. So far you have shown us the pecan in a light entirely favorable, but there are almost invariably two sides to every question. Is there really nothing against pecan culture in Texas? I am planning to put out a large grove this winter—am already securing the best nuts I can find in three counties with a view to that kind of performance. Now, I would like, under the circumstances, to hear something of the dark side (if there is one) before I go too far, and doubtless very many readers of THE GAZETTE are in the same fix as myself. Has the pecan no insect enemies that might knock it into a cocked hat at about the time when we had gone to all the expense necessary for establishing a pecan grove? Up to this time you have advanced not a word with reference to insect enemies of the pecan. It don't seem possible that a thing of so much importance to Texas could have only a bright side. Please answer through THE GAZETTE and much oblige a well-pleased reader of the agricultural department.

J. R. CLAYTON.

Dimmit county, Texas.

After thanking our correspondent for his kindly expressed appreciation of what THE GAZETTE has been doing, we would refer him to the second article appearing on this page as having been written in response to his request and suggestions.

ANOTHER PECAN LETTER.

If you remember I last year promised to send you a sample of my paper-shell pecans this fall. A sample of nine nuts is sent by this mail, which please acknowledge. Would like to have sent more; that is, what I would call a respectable sized sample, but the fact is the demand on me for the nuts is so far above the supply that I have been forced to put up with sending you a few. I have but one tree bearing as yet. It stands right where the waters of the Colorado river and the —— river come together. If you notice you will see black and red markings on the nuts, which, I think, is due to the different color of the soils where the tree grows, the soil carried down by one stream being black while that carried down by the other stream is red.

This tree is a most elegant one, and is as distinctive from other pecan trees as are the nuts from those of other trees. Already I have a fine lot of young trees grafted from this particular tree, all doing well and coming on rapidly.

No effort whatever has been made at booming my peculiar variety of the pecan, yet a knowledge of it has somehow spread among the people to such an extent that I have orders for all the nuts for several years ahead at $1 per pound. If you ever happen in this way please call on me and afford me the pleasure of showing you a tree, the sight of which would make your heart glad, I think; and I further think you would much enjoy a look at my grafted pecan trees.

I would request that you do not publish this letter in THE GAZETTE, for already I have more letters to answer about my pecans than I can well afford to attend to, about half of them inclosing no stamps for return postage. I have no pecans of this fine variety for sale at present. * * *

Central Texas.

It will be seen that we have rather violated rules in publishing a letter not intended for publication, but there was in the letter and its accompaniment so much of special interest to the general public of Texas that we could not well help pursuing this course. We have endeavored to make amends, however, by withholding both the name and address of our correspondent, and by leaving nothing in his letter that would enable anyone to locate him, and thus annoy him with correspondence, something upon which he seems to base his objections to being made known through the paper.

The pecans sent are really the finest we have yet seen in Texas. While large, it may be stated that we have seen larger pecans, but taking all their qualities into consideration we must pronounce upon these as the best seen by us, so far. The shells are extremely thin and packed as full of kernel as an egg is full of meat. The usual shell-divisions in the kernel are almost wholly wanting. And there is in the kernel a flavor peculiarly rich and agreeable—the finest, we must conclude, that we have yet tasted in any nut.

As we understand it, the tree referred to by our correspondent is one of natural growth. It is simply a favorable freak in the pecans, like the scuffernong grape is a favorable freak in the vitis vulpina or muscadine grape. We have often thought of such freaks in the pecan as entirely possible—why not in a nut tree of the forest as well as in a grape vine of the forest? And now that such freak has been found the matter is of special interest to the public as a stimulus to others to look for other pecan freaks.

We think the pecan abounds in such freaks. The natural pecan is doubtless a tree-bearing thick-shell nut, for the pecan is simply a hickory. All the thin-shell nut-bearers are probably freaks. It would seem so from the fact that there are no thin-shell species, and the tendency of the thin-shell varieties whose nuts are planted, seems strongly inclined to run to thicker-shell varieties. One naturally concludes that this is the result of crossing on the thick-shell varieties, but after considering the matter from every stand-point, we can no longer contend that the result is invariably due to this cause.

Scour the woods, then, in search of the very fine pecans. A single freak showing extraordinary excellence might prove as good as a gold mine to its finder and owner.

In his letter our correspondent opens up an idea that well backs us up in an existing possibility of valuable results to result from a valuable find among the wild pecans. He speaks of his young grafted trees. If it is possible to graft the pecan easily and with entire success the find may be perpetuated and extended to any degree required.

We know that the pecan can be grafted, but heretofore it has been considered that, as in case of all the hickories, the thing is not easy of accomplishment. If this last has been found to be otherwise, and the grafted trees unite to the stocks and establish themselves as well as do the seedlings, then a new era in pecan culture is just breaking in upon us. No man putting out a pecan grove will longer have any risk to run with reference to the character of nuts every tree will bear. It will bring pecan culture up to a high level and supply the world, eventually, with not only the best pecans ever met with, but also with the very best nuts known to man.

If our correspondent is not entirely too modest to risk such a thing, he could do us and the readers of THE GAZETTE a great favor by telling how he grafts the pecan, and all there is about it.

We might state in conclusion that it is not our opinion that the different colors of the soil, mentioned by our correspondent, had any influence whatever on the peculiar colorings appearing on the nuts sent. Those colorings are simply a peculiarity of his variety, and will ever appear where his variety comes true, without regard to character of the soil in which the trees are grown.

THE PEANUT IN TEXAS.

Your article in THE GAZETTE mentioning a successful experiment at peanut culture made by Mr. Robbins near Fort Worth has roused no small degree of interest in this section. I have long thought that the peanut might be made a most successful and profitable crop for us. There is one point not mentioned in your article that we would much like to be informed on. You did not give us the probable yield to the acre as shown by Mr. Robbins' experiment. Give us all the facts at your command on peanut culture, from time to time, as they appear before you, and doubtless THE GAZETTE will soon be able to congratulate itself upon having worked even one more great good for the agriculture of Texas in the way of bringing her into recognition as the champion peanut-producing state of the Union. Tell us something of what an acre to peanuts, properly managed, might be expected to do for the Texas farmer.

AN ADMIRING PATRON.

Weatherford, Tex.

After receiving your letter we called on Mr. J. M. Robbins for the purpose of interviewing him relative to the point untouched in our former article. He informed us that by bringing his peanuts to a regular stand, as they would have had by correct attention, it might be stated that he had in about one-fourth of an acre. Already he had picked off a considerable proportion of his crop—enough to convince him that he would get at least thirty bushels of merchantable nuts from that quarter acre. Four thirties, as you will understand, are 120. So, as it appears, Mr. Robbins' experiment has panned out at the rate of 120 bushels of nuts to the acre.

The next thing was to find out what peanuts were worth on our market, so that thing took us near a mile to the Fort Worth Grocer company, the concern from which most of our retailers of peanuts obtain their supplies. That concern told us that, while they could not put the figures down to actual cents, they concluded that the producer might safely depend upon nothing less than $1.50 per bushel for good goods. In all probability it would never be below those figures, though there was a chance that it would often be considerably above.

One hundred and twenty bushels of peanuts at $1.50 a bushel would be $180 to the acre, at a cost for culture, etc., decidedly less than that of an acre to cotton. How is that for high?

But we don't stop at this. Mr. Robbins told us that he was feeding his peanut vines to his horse, and that his horse would quit corn or anything else in the manger for them. They seemed to be relished more than anything else he could offer the animal, and, therefore, on account of the great abundance of the vines, he fully believed that it would well pay the Texas farmer to raise peanuts for the fodder alone, supposing that the selling value of the nuts was not at all taken into consideration.

WANTS A BETTER POTATO.

I read the agricultural department of the Fort Worth GAZETTE with a great deal of interest, and on this account feel that like the rest of them I merit a little information.

The nancemond, as you doubtless well know, is a favorite sweet potato at the North, but I find that it does not succeed well in Texas. I therefore wish to ask you if there is any other bright yellow yam which, say when half grown, would resemble the nancemond and be early? Please reply through THE GAZETTE and much oblige, with others,

C. B. MESERVE.

Sunset, Tex.

Few things could be more difficult than the identification of a sweet potato, as to variety, by the local name given, owing to the fact that there is no established and accepted nomenclature for the varieties. This thing is one decidedly unfortunate, and on several occasions we have urged upon sweet potato growers to hold a convention for the purpose of establishing regular names. A crop of so much importance as is the sweet potato to the South is certainly deserving of some such movement.

In the present loose arrangement of affairs with reference to the sweet potato we can have no positive idea of what variety you are meaning when you speak of the nancemond. About Fort Worth there is raised a long-shaped yellow potato with rough skin that goes upon the market as the nancemond. Along the eastern gulf coast the same variety is sparingly raised under the name of Spanish potato, while the nancemond of that region is a potato about the same shape and size, with smooth skin and not quite so yellow. This same nancemond of the coast east of us is the Southern Queen of the potato growers in the neighborhood of St. Louis, while the Southern Queen of Virginia is a large, globular, white, sappy and very early variety called "chokes" and "poplar roots" along the eastern gulf coast.

In this portion of Texas we have a larger-growing and later potato, called the "Texas yam;" that potato along the eastern gulf coast regions goes by the name of white Hayti in some localities, and Dooley yam in others. The red potato of this section of Texas called the red yam is the musgrove of the states east of us, generally, though the people of a few localities, as at Mobile, Ala., for instance, call it the red Hayti. The most popular potato along the eastern gulf coast is called either the old yellow yam or the Carolina yam; the same potato, though not much raised, is here called the East Texas yam. A dark red, long-shaped, white-fleshed, dry, mealy, and very prolific potato sparingly raised about Fort Worth is called the Missouri red; the same variety is extensively raised in Mississippi, Alabama, Georgia and the Carolinas, under the name of "nigger killer." So, you see, we are unable to talk intelligently to you about your nancemonds.

If your nancemond is the rough-skinned potato carrying that name at Fort Worth, then we can say to you that there are several better varieties that might be made to fill its place. The nancemond of the Eastern coast is a much better potato. It is not quite so early or quite so yellow as the Fort Worth nancemond, but it is far more attractive in appearance, does well and may be handled to advantage on the local market when not more than half grown. No other variety is so popular about St. Louis, where, as already stated, it goes by the name of Southern Queen.

This rough-skinned nancemond — the Spanish potato of other regions—tends to run out rapidly. Twenty years ago it had quite a boom in South Alabama, and when first introduced it was really a very fair potato, but in a few years it had deteriorated and grown unprofitable, hence it is now seldom seen there.

We would like to hear from our readers relative to what they know of the best sweet potato for Texas.

THAT DEVIL'S RIDING-HORSE.

I am a subscriber to the Fort Worth GAZETTE, and must be permitted to say that I am highly pleased with the agricultural department, and especially so with its interesting answers to correspondents. That sub-department gives one a great deal of very useful information and not a small degree of amusement.

Doubtless the guinea pig is a rodent and the Florida gopher a turtle, but I fear that the Florida "devil's riding-horse" is not our well-known friend the skunk.

The Arkansas "devil's riding-horse" is also not a harmless insect, as my own experience teaches me. If disturbed it will it will throw a poisonous substance towards the disturber, and should this happen to get into the eye it does burn worse than fire or Spanish pepper. We have the Mantis religiosa or praying mantis here, which is considered harmless, but of the other (Mantis carolina) we fight shy.

We have two kinds of devils' riding-horses here (unless the two should be simply male and female, an idea strengthened by the fact that they are often seen together;) one is very fat and fleshy, and is vulgarly called the devil's riding-mule; the other is very lean and is vulgarly called the devil's riding-horse.

A few years ago our woods were full of these insects, and the hogs devoured great quantities of them and many porkers died from the effects of the poison, as we supposed.

FRANCIS HOLSTEIN.

DeRoche, Hot Springs county, Ark.

Miraible dictu! whatever that means. Hold on, Florida man, and don't send us any of your devil's riding-horses unless you have already started them on the way. Send them to Professor Riley, the United States entomologist at Washington, D. C., or to any other man that we do not care so much for as we do for ourself, provided they, like the Arkansas devil's riding-horse, are as hot as fire or Spanish pepper. But if this reaches you too late, the shipment having already been made, we shall have to take our chances, of course. And what is still worse, we will be unable to blame any one save ourself for our very unfortunate rashness. We tremble while we write these few lines, etc., still there is one thing we cannot understand well enough to prevent it from giving us a little hope, to-wit: Our well-informed correspondent gives us two scientific names (Mantis religiosa and Mantis carolina), and since Mantis religiosa is simply the old and discarded name for Mantis carolina, there are left for us some grounds for the hope that there may be some kind of mistake in the case, after all. We do not hesitate to knock our fists together and declare that we are man enough for any mantis correctly bearing either of those names.

Our correspondent seems to think that the two insects referred to may be simply male and female of the same species. That also cheers us, for should such be the case it is probable that the male is the one that ejects the poison which, when getting into the eye, burns worse than fire or Spanish pepper, and that all of this is due to the fact that the males, like many males in another branch of our earth's fauna, are addicted to the use of tobacco. While tobacco juice expectorated into the eye might not be exactly as bad as fire or Spanish pepper, the fellow who got a dose of it in that way would be apt to think, just at the time, that it was burning bad enough for anything.

THE SPANISH CHUFA.

Will you be so good as to let me know through THE GAZETTE how many pounds a bushel of Spanish chufas weighs, and how much land might be correctly planted with a bushel of good seed? When is the best time to plant? I read THE GAZETTE regularly and am much pleased with it as a family and farmer's paper.

C. S. ONDERDONK,

Waco, Tex.

In her scale of weights and measures the state of Georgia has put dried chufas at forty-four pounds to the bushel. A bushel of good chufas will plant about five acres. They are planted in rows three and a half feet apart and eighteen inches apart in the row, a single tuber to the hill. About the last week in March would be a good time to plant in your latitude, though the crop might do well enough planted several weeks later.

WHAT MINERAL IS IT?

I have inclosed in a small tin box and forwarded to your address by mail a few fragments of quartz rock from the outcroppings of a ledge. The most of them, as you will see, are coated with a mineral substance very much resembling gold; but it is not gold, neither is it what is commonly called "fool's gold." Please let me know what it is, or what it indicates. Do you regard the quartz as probably some mineral-bearing rock, and that this subtance upon it is the "blossom" of some mineral? The stratum from which the specimens were taken lies nearly vertical. It is about twenty inches wide, runs east and west, and is bounded on either side by clay "gouge."

Hoping I am not trespassing too much on your time, and thanking you in advance, I am

FRANCIS HOLSTEIN.

De Roche, Hot Springs county, Ark.

Your rock is an imperfect chert, and not a quartz at all. The largest specimen, of a light color, has the peculiarities of buhr stone. The yellow matter interesting you, as appearing on the specimens, is limonite iron—the yellow ocher of the paint shops. Nothing beyond what you see on the surface is indicated.

A DEAD MAN'S PORTRAIT.

THE STORY TOLD TO A GAZETTE REPORTER.

A Portrait of a Likeness Painted From Memory Proves Faithful in Every Particular—A Strange Tale.

Samuel Miller of Lynchburg, Va., a several times millionaire, on his death gave nearly all of his estate to build and endow two orphan asylums—one for girls and one for boys, the former being located at Lynchburg, Va.—besides giving that city its waterworks and fair grounds. The following story embodies the facts, which authenticates the account as given by THE GAZETTE some weeks ago:

The Story as Told by the Gazette.

A story was recently told a GAZETTE reporter by a young attorney of Fort Worth which shows one of three things: That the imagination of the young gentleman has been carefully schooled, so as to produce abnormal development; that his father, who figures in the narrative, was a man of wonderful descriptive powers, or that a young artist, then unknown to fame, but who has since acquired it, was endowed with a faculty which borders on the impossible. The circumstances, as related, were, however, vouched for by him who told them, and happened in Richmond, Va., the native town of the attorney. They were as follows:

Some years since there died in Richmond a several times millionaire, who in contrariety to men of this class was a philanthropist in every sense of the word, and this fact is stranger still when the circumstances surrounding his birth and his life becomes known. Most men it would have soured and hardened, caused them to turn against the world, and engendered the belief that every man's hand was against them. On the contrary, these circumstances had an opposite effect on the man in question, and when he had amassed a competency reaching up into the millions, he turned his attention to alleviating the distress of whomsoever applied to him for aid. His kind offices and philanthropic deeds became notorious and endeared him to the whole section of country in which he lived. Several colleges and eleemosynary institutions of his state were endowed by him in sums ranging from $100,000 to $500,000.

Strange to say, the dispenser of all these charities was nameless in the common acceptation of the term. That is, his mother was an outcast from the pale of society, and who his father was he never knew. Notwithstanding the unfortunate circumstance that constantly stared him in the face and the cloud thrown around his birth, for which he was shunned by companions of his own age, this man rose above them all, and by his innate manhood and the always honorable, upright, Christian manner of his living demanded and received the esteem, respect and love of his neighbors. He lived to the age of fifty or more, and upon his death willed all of his vast property, except some donations to servants and friends, to charitable institutions. Some time after his death it occurred to one of the institutions which owed its prosperity to him that a portrait of him would be a most fitting adornment for the walls of its library, but this seemed impossible, as the dead lover of his fellowmen had left no picture by which his likeness could be handed down. The father of the young Fort Worth attorney, who is responsible for this narrative, was a friend to the dead man from his boyhood till his death, and was much in his company. He accordingly expressed the belief that if the services of a certain young artist in Richmond, who was a veritable genius in his chosen vocation, could be secured, he would be able to give such a description of the painter as would enable him to reproduce the features of the dead man. The artist, whose name was Fisher, was accordingly sent for, and he and the gentleman in question set about their task. The artist under the direction of the attorney's father, made changes and alterations in the features till the face was said to be an exact counterpart of that of the man for whom it was intended. The fact was published in the local papers, and afterwards served to make the artist famous. Ten years afterward the body of the philanthrophist, which had been interred in a metallic, air-tight coffin, was exhumed and was in a perfect state of preservation. The portrait was placed alongside the face of the body which had been exhumed, and every feature of the portrait corresponded exactly with those of the dead man.

Whether this story is true or not is not vouched for by THE GAZETTE.

The Artist's Verification.

My attention was called a few days since by Dr. Terrell of Lynchburg to an article in your paper of September 7, giving a brief but inaccurate history of a full-length portrait painted by myself of the late Samuel Miller, which now adorns the walls of the female orphan asylum founded by him at Lynchburg, Va.

The article in question contains some inaccuracies. After reading it I concluded to write you a correct history of what I claim to be in some respects one of the most remarkable portraits in the world. I will be as brief as possible, and ask that you publish my statements.

The years of 1867 and 1868 were spent by me professionally in painting portraits for different families in Lynchburg. While there, Mr. Miller had me to call at three different times to see him in regard to my painting a view of the mountain landscape as seen from his front piazza. I was afterwards engaged in Tennessee and other places, and lastly in Richmond, Va. In the meantime Mr. Miller had died. It was during my stay in Richmond that Gen. James McDonald, then secretary of state, urged me to attempt to recall to my mind the features of Mr. Miller, and portray them on canvass. I hesitated for several months, as it had been seven years since I had seen Mr. Miller. Many old faces were in my mind, and it was impossible for me to determine which of these was Mr. Miller's face. Finally I told Gen. McDonald that I would go to Lynchburg, to Mr. Miller's old home, among his old friends and see what could be done. After talking with many of his friends, I finally determined to go out into the country to Dr. Terrell's home. He was Mr. Miller's physician, and a near neighbor for many years.

In the quiet of the country in sight of his home, and with talks and criticisms from the doctor, I began my task to bring back his face to my memory and transfer it on canvas. At first I met with discouragements from the doctor, as he viewed it as a thing impossible. But undaunted in what I had determined to do, I set to work on an old face in my memory, not yet knowing it to be the face of Dr. Miller. I worked and studied hard for several days with no encouragement, finally on the third or fourth day the doctor left early to visit the sick and did not return until near midnight. Left to myself, I studied and worked hard all day and until near midnight to bring back a lost face in memory. I had just retired when there was a rap at my door. It was the doctor, who wished to see what I had been doing. Lighting the lamp and placing my day's work before him he looked for a moment, then exclaimed: "You have it; that looks like Mr. Miller." I felt that I was right; that the old face I still saw through memory was the face of Mr. Samuel Miller. I could not describe my feelings on hearing this. I felt then that the battle was won and that I should succeed in what I had undertaken. I worked for some days and brought out the face in its details until finally it was pronounced by the doctor a perfect likeness; but to be sure of it he said he would send for his old overseer, telling him he wished to see him on business. The doctor asked him into his office, where the picture was hung opposite him, and the moment he glanced upward his eyes rested on the picture. He exclaimed: "Lors, if there ain't old marster." The doctor asked if the eyes, nose, mouth, etc., were like Mr. Miller's. He answered, "Yes; it is all like him. It looks exactly like old marster." I afterwards exhibited it to his old friends in the city of Lynchburg with not one adverse criticism. I inclose with this a few of the testimonials of those who were most intimately acquainted or associated with him in business matters. After finishing the portrait I got permission to open the grave and look once more at the face of Samuel Miller as he lay in his coffin. His remains were still preserved. So true was the likeness of the portrait that I never changed a line nor touched a pencil to the face afterwards.

This is a true history of what I claim to be one of the most remarkable portraits in the world. And the little orphan girls in all the years to come can walk into that room and see their old benefactor's face. A face once lost in death, but brought back through memory again to the living. Yours respectfully,

F. L. FISHER, Artist,
Washington, D. C.